

REMARKS

In the Office Action, the Examiner rejected Claims 1 and 3-20 under 35 U.S.C. 112, first and second paragraphs. The Examiner also objected to the language of Claim 1. In particular, Claims 3-20 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement; and Claims 1, 3, 11 and 18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

None of the claims was rejected over the prior art, and the Examiner indicated that Claim 1 would be allowable if amended to overcome the 112 rejection and the objection to the claim language, and that Claim 2 would be allowable if appropriately rewritten in independent form.

Independent Claims 1, 3, 11 and 18 are being amended to better define the subject matters of these claims.

For the reasons set forth below, all of Claims 1-20 comply with the requirements of 35 U.S.C. 112, and, specifically, comply with enablement requirement and are clear and definite. The Examiner is thus asked to reconsider and to withdraw the rejections of Claims 1 and 3-20 under 35 U.S.C. 112 and the objections to Claims 1 and 2, and to allow Claims 1-20.

The objections to and the rejections of the claims appear to be based on two basic issues. The first issue relates to the fact that the claims did not expressly describe a one-to-one relationship between the channel wavelengths and the filter. The second issue is whether the

claims need to describe details of the way in which the feedback signals are used to adjust the network or the optical signals in the network to compensate for changes in those optical signals.

After carefully reviewing the claims and the Examiner's discussion of the claims, Applicants are amending the independent Claims 1, 3, 11 and 18 to address the first of the above-identified issues. Claim 1 is also being amended to address the rejection of the claim under the second paragraph of 35 U.S.C. 112; however, Applicants believe that Claims 3, 11 and 18 describe complete and operable inventions and do not need to be amended to describe details of the control or feedback mechanism used to make the desired adjustment to the network or the optical signals used in the network.

With respect to the first of these issues, the Examiner, in the Office Action, made very helpful suggestions for amending the claims to describe expressly a one-to-one relationship between the channel wavelengths and the network filters; and Claims 1, 3, 11 and 18 are being amended in accordance with the Examiner's suggestions.

More specifically, Claim 1 is being amended to describe expressly the limitations of dithering the wavelength of each channel about the center of a respective optical filter bandpass, and then passing each channel through its optical filter bandpass to obtain a measurement of the optical transfer function in the network. Claim 3 is being amended to describe the limitations of dithering the wavelengths of each of a set of optical signals about the center of a respective optical filter bandpass, and then passing each of these signals through its optical filter bandpass to generate filter output signals.

Claim 11 is directed to a multichannel optical control monitor, and Claim 18 is directed to a combination add unit and drop unit for a multi-channel optical network. Both of these claims are being amended to describe means for dithering the wavelength of each optical signal about the center of a respective optical filter bandpass, and then to pass each optical signal through its optical filter bandpass to generate filter output signals.

As presented herewith, the claims describe expressly the feature that each wavelength, channel or optical signal is dithered about the center of, and then is passed through, a respective bandpass filter. This arrangement is described in detail in the specification, for example from pages six through eleven, and is fully enabled by the present specification. Accordingly, the Examiner is asked to reconsider and to withdraw the objection to Claim 1 and the rejections of Claims 3-20 under 35 U.S.C. 112, first paragraph.

Claim 1 is also being amended to address the rejection of the Claim under 35 U.S.C. 112, second paragraph. In particular, this claim is being amended to add expressly the steps of generating feedback from obtained measurements, and using the feedback signals to adjust the network or optical signals in the network to compensate for changes in those signals. In this way, Claim 1 now sets forth all the steps needed to “track and compensate for changes in a multichannel, dense wavelength division multiplexing (DWDM) network).

To elaborate, the tracking is done by dithering the wavelength and then passing each wavelength through its optical filter bandpass, as described in the dithering step of Claim 1. The

compensating is achieved by using feedback signals, generated from measurements obtained when the wavelengths are passed through the optical filters, to adjust the network or the optical signals used in the network to compensate for changes to those optical signals.

After carefully reviewing Claims 3, 11 and 18 and the Examiner's discussion in the Office Action, the rejection of these claims under 35 U.S.C. 112, second paragraph, is respectfully traversed.

Claim 3 is directed to a method of adjusting for changes in optical signals transmitted through a multi-channel optical network. This claim positively sets forth the step of tracking those changes by dithering the wavelength of each optical signal about the center of a respective optical filter bandpass, and then passing each of the signals through its optical filter bandpass to generate filter output signals. Claim 3 includes the further step of using the filter output signals to adjust the network or the optical signals to compensate for said changes by adjusting the wavelengths of some of the optical signals in the network to maintain a defined optical transfer function in the network.

These steps describe a complete and operable procedure for adjusting for changes in optical signals transmitted through a multi-channel optical network.

It is noted that Claim 1 does not describe specific details of the way in which, in the preferred embodiment of the invention, the feedback signals are used to obtain the desired adjustment. These details, however, are not necessary for the claim to be complete. All the

essential steps needed to comprise a method for adjusting for changes in the optical signals are set forth in Claim 1. The feedback signals can be used or processed in various specific ways to achieve the desired adjustment of the optical signals, and it is not necessary to limit the claim to any one of these suitable procedures.

Similarly, Claims 11 and 18 are complete, and describe all of the features needed to achieve the desired results.

In rejecting Claims 11 and 18 under 35 U.S.C. 112, second paragraph, the Examiner specifically argued that the claims do not describe all of the details of a fully functional tracking circuit. Applicants respectfully submit that the claims do not need to expressly set forth these details.

Claims 11 and 18 expressly set forth a tracking circuit and describe elements of the tracking circuit. These elements include a control for using the filter output signals to make a defined adjustment to compensate for said changes by adjusting the wavelengths of the optical signals in the network to maintain a defined optical transfer function in the network.

Additional details of the tracking circuit are not necessary for the claims 11 and 18 to be complete. All the essential features needed to comprise either a complete and operable optical control monitor (which Claim 11 is directed to) or a combination add/drop unit (which Claim 18 is directed to) are set forth in the respective claims. The tracking circuits can operate in various specific ways and can have various specific details to achieve the desired adjustment of the

optical signals. It is not necessary to limit the claims to any one of these details.

In view of the above-discussion, Claims 1, 3, 11 and 18 are clear and definite, and in particular, define complete and operable inventions. The Examiner is thus asked to reconsider and to withdraw the rejections of these claims under 35 U.S.C. 112, second paragraph.

It is noted that none of the claims was rejected over the prior art, and it is believed that Claims 1-20 are now in condition for allowance.

For the reasons set forth above, the Examiner is respectfully asked to reconsider and to withdraw the objections to Claims 1 and 2, the rejections of Claims 3-20 under 35 U.S.C. 112, first paragraph, and the rejection of Claims 1, 3, 11 and 18 under 35 U.S.C. 112, second paragraph, and the Examiner is requested to allow Claims 1-20. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

John S. Sensny
John S. Sensny
Registration No. 28,757
Attorney for Applicants

SCULLY, SCOTT, MURPHY & PRESSER, P.C.
400 Garden City Plaza – Suite 300
Garden City, New York 11530
(516) 742-4343

JSS:jy